

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of)
KACZUN et al.) Art Unit: Unknown
Serial No.: TO BE ASSIGNED) Examiner: Unassigned
Filed: Herewith)
For: PHOTSENSITIVE FLEXOGRAPHIC PRINTING ELEMENT HAVING AT
LEAST TWO IR-ABALATIVE LAYERS

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to initial examination of the above-identified application, kindly amend the application as follows.

IN THE CLAIMS

Claim 4, line 2, change "one of claims 1 to 3" to --claim 1--.

Claim 5, line 2, change "one of claims 1 to 4" to --claim 1--.

Claim 6, line 2, change "one of claims 1 to 5" to --claim 1--.

Claim 7, lines 3 and 4, change "one of claims 1-6" to --claim 1--.

REMARKS

The claims have been amended to eliminate multiple dependency and to place them in better form for U.S. practice. Favorable action on the application is solicited.

KACZUN et al.

0087/000048

Please charge any shortage in fees due in connection with the filing of this paper, to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

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COPY OF ALL CLAIMS PENDING

1. A photosensitive flexographic printing element for the production of flexographic printing plates for digital imaging by means of lasers, comprising at least

- a dimensionally stable support,
- at least one photopolymerizable layer, at least comprising an elastomeric binder, a polymerizable compound and a photoinitiator or photoinitiator system,
- at least two laser-ablatable layers A and B, each comprising at least one binder and also an IR absorber for laser radiation, and
- optionally a removable, flexible protective film

wherein the at least one binder of layer A is an elastomeric binder and the at least one binder of layer B is a self-decomposing binder, and the optical density of the entire layer sequence of IR-ablative layers in the actinic spectral region is at least 2.5.

2. A photosensitive flexographic printing element as claimed in claim 1, wherein the self-decomposing binder of layer B contains nitro or nitrate ester groups.
3. A photosensitive flexographic printing element as claimed in claim 2, wherein the binder containing the nitro and/or nitrate ester groups is a cellulose or cellulose ether nitrate ester.
4. A photosensitive flexographic printing element as claimed in claim 1, wherein the elastomeric binder is a binder comprising diene units.
5. A photosensitive flexographic printing element as claimed in claim 1, wherein the IR absorber is carbon black.
6. A photosensitive flexographic printing element as claimed in claim 1, wherein the flexographic printing element has further IR-ablative layers.
7. A process for the production of a flexographic printing plate in which the starting material employed is a photosensitive flexographic printing element as claimed in claim 1, comprising the following steps:
- (a) removal of the removable, flexible protective film, if present,
 - (b) writing of a mask into the layer system comprising IR-ablative layers by means of an IR laser,
 - (c) full area exposure of the photosensitive element to actinic light through the mask formed in step (b),

- (d) treatment of the intermediate formed in (c) with at least one developer solution, during which the residues of the IR-ablative layers which have not been removed in step (b) are removed and the exposed photopolymerizable layer is developed.
8. A process as claimed in claim 7, wherein step (b) is carried out using a laser apparatus having a rotating drum, and the flexographic printing element is mounted on this drum for ablation.